Bulletin 692

Furniture Fabrics

OSU Cooperative Extension Service
The Ohio State University

About Furniture Fabrics

Furniture fabrics fall into two general categories - those meant for use as slipcovers and those for upholstery. Slipcovers are designed to fit snugly and yet be removable for cleaning. Upholstery fabrics are nailed or stapled directly to the wood frame or bonded to the padding. They are not removable.

For ease of sewing, slipcover fabrics tend to be light to medium in weight. Upholstery fabric is heavier. Because of the use received, furniture fabrics should be sturdy, cleanable, and resistant to soil and stains. They should also be comfortable to the touch since one's arms, legs, and back of the neck may rest on them.

Appearance

Color, texture, and pattern are the first things you will notice about fabric. Each contributes to whatever character or "personality" the fabric has. Because of the amount used in most rooms, fabrics, including draperies and carpeting, can almost singlehandedly establish the character or feeling you esire—formal, informal, rugged, refined, exotic, romantic, or just comfortable.

To get the feel of fabrics, be sensitive to the part each element plays. For example, a large pattern in deep, rich colors may seem bold and sturdy. If printed in light colors, the effect may be quite the opposite. Earthy colors may suggest the out-of-doors, deep jewel-like colors tend toward the exotic while an emphasis on soft, light colors often creates a refined or delicate look. Textures run from coarse to smooth, crisp to soft, dull to shiny. They not only differ in character but also influence the effect of color. A blue velvet, for example, is very different from a blue tweed. In the past few years, there has been a tendency to combine several patterns into one room. Whether or not you wish to do so will depend upon your tastes and the mood you wish to create. Patterns add detail and appear to fill space.

Repetition of one pattern or use of a combination of patterns can create a snug, intimate feeling. However, a cluttered effect may also be the result if patterns are not selected with care. Patterns tend to look well together if they have a similar feeling and if they appear distinct from one another. For example, use one with a light background and another with a darker background. One might be small and the other large or one might be more dynamic in color. Generally speaking, one pattern will probably be more important than the other.

Regardless of their "style," most pieces of furniture can be combined with fabrics that are either contemporary or traditional in nature. The important considerations are similarity of scale and overall character. What matters is that you pick those that appeal to you and which are appropriate for your way of life.

Here are some general guidelines:

- Make a room seem more spacious by covering large pieces of furniture in a color which blends into that of the wall and perhaps the floor. Light colors tend to expand space. Darker colors close in.
- Emphasize a special piece of furniture by choosing a color which contrasts with the wall.
- Produce a formal feeling with fine lustrous fabrics.
- Produce a more casual feeling with relatively rough fabric textures and dull finishes.
- Use the relatively heavy, coarse textures and large prints with furniture of large scale and coarse-grained woods.
- Use lighterweight, smoother textures and smaller prints on small scaled pieces of fine-grained woods.
- Large rooms generally require patterns of larger scale than do small rooms.
- For visual interest, some variations in color, pattern and/or texture are usually needed. However, books, plants, paintings, wallhangings, and other functional and decorative objects may fill this need.

Before deciding on a particular fabric for a piece of furniture, take a sample home to try out. Place it in the room where the piece of furniture will be. How does it look in the daylight and at night? How does it look with the walls, carpet, and other furnishings in the room? How does it feel?

Wearability

The qualities of durability in upholstery and slipcover fabric depend upon the **fiber content, twist of the yarn, fabric structure,** and **finishes applied.** The fabric is also affected by the use it will receive and whether or not it receives routine care.

Fibers

The label on new upholstered furniture *does not have* to state the fiber content. Generally, however, this information is given on the back of the swatches of fabric available in a particular line of furniture. According to the Federal Trade Commission, any statements made must be accurate. If the swatches do not have this information you *may* be able to get it from the salesperson.

When the fiber content is given on a label, each and every kind of fiber present in the upholstery fabric should be identified by listing the fiber content and percentages of fibers, in order of their predominance by weight in the total fiber content. Fabrics purchased *by the yard* for upholstery or slipcovers are subject to the Textile Fiber Products Identification Act of 1960. These fabrics must be labeled with the fiber information as indicated above.

Knowledge of the fiber content will give some clues as to what you can expect from the fabric and required care. Fibers for furniture fabrics are used either alone or in combinations of two or more fibers. Special design and color effects often result by using a combination of several different generic fibers in one fabric. Certain fibers are combined because their properties complement each other and produce a suitable fabric for the end use of upholstery or slipcover fabric. It is impossible to know by look or feel what the fiber content is. Thus, the label is very important.

The following lists the fibers usually found in furniture fabrics and the characteristics which would apply when used to cover furniture.

Natural Fibers

CELLULOSIC: Cotton, linen
PROTEIN: Wool, Mohair, Silk

Cotton takes dye well, is relatively strong and abrasion resistant. Its properties are well-known and specific finishes tailor it for its end use in upholstery and slipcovers. Relatively good performance can be expected.

Unless treated by special finishes, both **linen** and **cotton** may shrink if washed, wrinkle, and burn. A soil release finish which keeps soil from penetrating the fiber is advisable.

Linen fibers tend to be stiff especially when humidity is low and, therefore, vulnerable to abrasion. This disadvantage can be partially overcome by omitting welts at points subject to greatest wear such as around seat cushions. In addition, the fiber does not absorb dye well and color is lost when its color wears off at abrasion points. This may not be noticeable on printed fabrics with natural backgrounds.

In combination with other fibers, linen lends body. The longer staple variety tends to be more durable, lint-free, and expensive than that made from shorter staples. As fiber lengths vary, quality also varies.

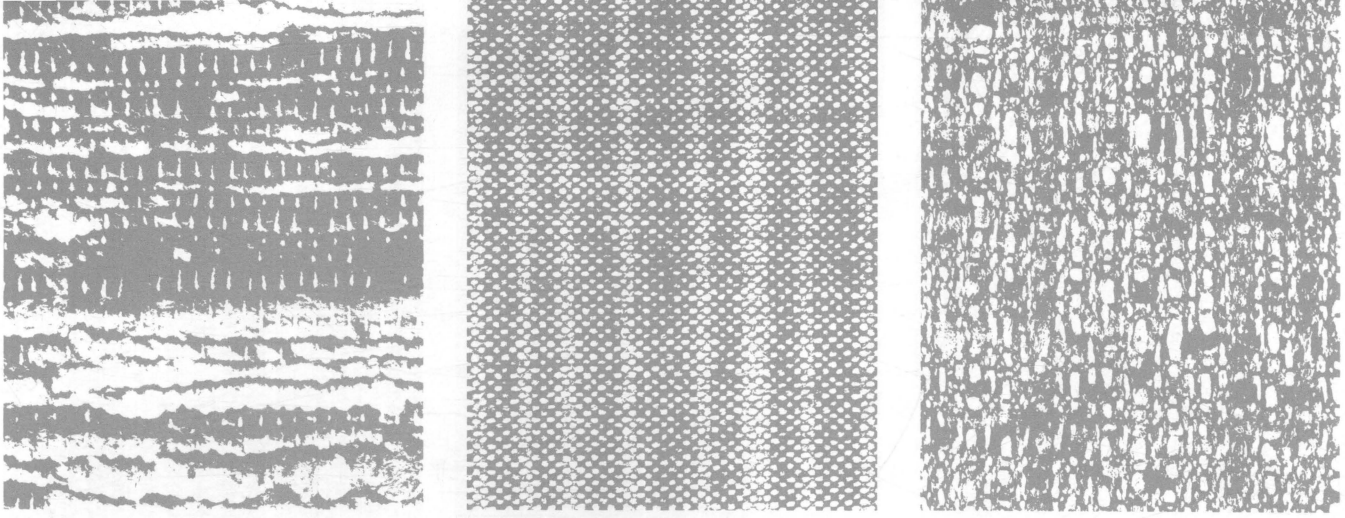
Wool and **mohair** dye readily, are durable, resilient, wrinkle and soil resistant, and have excellent soil-release properties. Once commonly used for upholstery fabrics, these fibers are expensive and relatively small amounts are used today. Some types of **silk** have similar qualities. Generally, only a small amount of this luxury fiber will be found in fabrics for furniture.

Man-Made Fibers

Regenerated or Modified Cellulosic: Rayon is an example of a regenerated cellulosic; **acetate** is a chemically modified cellulosic. These fibers are produced from natural cellulosic materials such as cotton linters and wood pulp.

Some trademark names are:
RAYON: *Avril, Enkrome, Fibro*
ACETATE: *Estron, Lanese*

Fibers are relatively inexpensive and produce attractive fabrics. However, due to low resistance to abrasions, fabrics with a high percentage of **acetate** are not recommended for heavy use. Abrasion resistance of rayon varies according to type. Consumers usually have no way of knowing what type has been used in the fabric. **Acetate** is heat sensitive and melts if hit by sparks from fireplace or cigarettes. **Rayon** is less heat sensitive but is flammable unless treated. **Acetate** and **tri-acetate** are dimensionally stable. Most rayons are not and may shrink or stretch with changes in humidity. Both **acetate** and **rayon** dye readily. **Acetates** are subject to



Some examples of plain weaves.

atmospheric fading unless solution-dyed. A soil-resistant finish which keeps soil from penetrating the fiber is advisable.

Synthetic Fibers are made primarily from petrochemicals. Some examples are:

Generic Names	Trademark Names
ACRYLIC	*Creslan, Acrilan, Orlon, Zefran*
MODACRYLIC	*Verel, Elura, SEF*
NYLON	*Antron, Cadon, Courtaulds Nylon, Zeflon*
OLEFIN	*Herculon, Marvess, Vectra*
POLYESTER	*Avlin, Dacron, Fortrel, Kodel, Spectran, Strialine*

Since these fibers are not moisture absorbent, they tend to be resistant to shrinking and stretching. In general, these fabrics will hold their shape well. **Nylon, olefin,** and **polyester** are very abrasion resistant; **acrylics** only moderately so; **modacrylics** are low in abrasion resistance.

Modacrylics are naturally flame resistant; all others can be treated for flame retardance. All fibers are heat sensitive and will melt where hit by sparks from a fireplace or smoking materials. Low ironing and drying temperatures are also necessary.

All fibers tend to be subject to permanent staining from body oils and perspiration unless treated with a special finish. Fibers tend to resist staining from water-borne substances. Extra covers for arms and head area are recommended.

A wide variety of properties is possible within each generic name. Each can be modified to change both physical appearance and performance. Fibers can be solution-dyed, texturized, given soil resistant and anti-static properties, increased bulk, and resilience.

Since characteristics vary, follow care instructions when provided. These instructions usually reflect the effect of cleaning agents on the specific fibers used. For example, chlorinated hydrocarbon dry-cleaning solvents such as perchlorethylene should never be used on **olefins.**

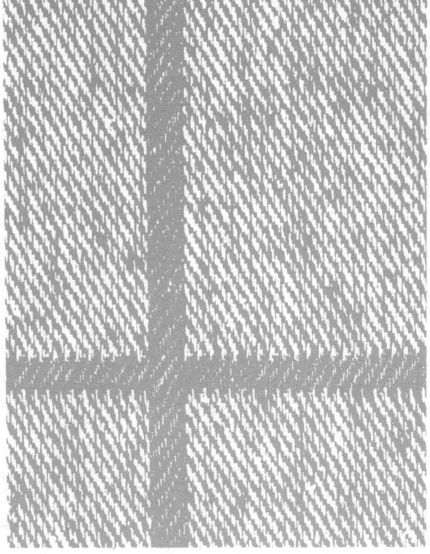
Yarns

Yarn properties affect aesthetic qualities, wearability, and care required. A yarn is a group of fibers laid or twisted together to form a continuous strand. Yarns are made from either short (staple) fibers or very long (filament) fibers. Filament fibers are always man-made with the exception of silk which is a natural filament fiber. Twisting brings fibers closer together resulting in stronger, more compact yarns. Variations in twisting and spinning can produce a wide variety of textures and patterns in finished fabrics. Tightly twisted yarns are generally the strongest and most soil resistant. A thick yarn may or may not be as strong as a fine one.

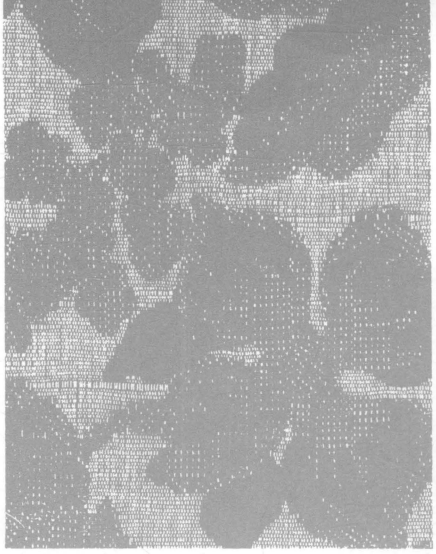
Woven Fabric Structure

Fabric used for slipcovers and upholstery is constructed in the basic weaves of plain, twill, and satin—in complex weaves such as brocade, damask, matelasse, dobby, pique or cord and pile weaves found in corduroy and velvet. Plains and twills, due to their balanced weave, are generally the most durable. However, regardless of type, the closer the weave and the tighter the yarn twist, the more resistant the fabric will be to abrasion, wrinkling, seam slippage, and soiling. Weight is also a factor. Other factors being equal, one should not expect a lightweight fabric to be as long lasting as a heavier one.

To test for closeness of weave, hold the fabric in front of a lamp or window to see how much light comes through. Loose weaves are less durable than tight weaves because there is less fiber to take the daily wear and tear. The yarns also tend to move



Twill



Brocade

Pile weave

back and forth easily causing them to rub against each other and break. Loosely woven fabrics often wrinkle and stretch.

The yarn floats, loops, and nubs which contribute to design appeal may also have performance disadvantages. Loose threads floating on the surface are easily snagged. Nubs and low twist yarns tend to pick up soil. If the fabric is not intended to receive heavy use, aesthetic qualities may outweigh these disadvantages.

A latex backing frequently applied to upholstery fabrics helps stablize them and minimize some of the problems. The latex forms a coating which also helps keep soil from sifting through, prevents seam slippage, and makes precise cutting possible. Loosely woven fabrics should have an applied backing to assure stability and longer wear.

Pile fabrics such as velour, velvet, corduroy, and frieze have appealing visual and tactile qualities. For a dense, resilient and durable pile, the base should be of a tight, firm weave. Check to see that the pile yarns are firmly anchored to the base. All pile fabrics, except frieze, tend to crush or shade—some more than others. This creates some color distortion which is objectionable to some people. Fabrics made of the more resilient fibers—like nylon and polyester—are more resistant to crushing and shading than cotton or rayon. Pile fabrics tend to be longwearing as the pile, not the backing, takes the wear. They do, however, tend to pick up soil due to the large amount of exposed fiber.

Knits for furniture are relatively new. They are especially suited to contemporary furniture due to their ability to conform smoothly to curves. Keep in mind that they may snag or pull under rough use. Knits which are laminated to a backing material will be less likely to wrinkle and lose their shape.

Finishes

All fabrics go through various finishing processes before they reach the consumer. These processes may contribute as much to the final product as do the actual fibers and method of fabric construction. Some of these finishes enhance the fabric by making it smoother and more lustrous or by improving the appearance and texture. Others are functional and may contribute antistatic, flame retardant, or stain resistant properties.

Resistance to soiling and/or staining is desirable and fabrics can receive these properties in one of two ways. The fiber may be chemically modified to reduce its attraction for soil or a finish which coats the fiber may be applied. Synthetic fibers tend to repel water-borne soils but are susceptible to oily substances. If the fabric is not treated, oily stains tend to become permanent.

Silicone finishes tend to repel water-borne substances while fluorocarbon finishes resist both water and oil. Their purpose is to repel spills long enough to permit wiping up and to help release soil during cleaning. Some may need to be renewed after cleaning. When purchasing a fabric, check to see if it has been treated and which type of finish has been applied.

There are also sprays on the market which can be applied by the consumer. Labels stress application to colorfast new or thoroughly clean fabric only. Presence of cleaning solvents or foam may limit effectiveness.

Spills and stains should receive prompt attention whether or not the fabric is soil and stain resistant. The longer the stain remains, the harder it will be to remove. Some substances, such as shoe polish, mustard, and lipstick, may even cause permanent discoloration.

Guarantees & Warranties

In conjunction with upholstery manufacturers a few furniture manufacturers have introduced warranty programs and other types of guarantees. Make sure you understand what is and is not included in such a program. Some guarantees state they will replace or refund upholstery covers if the cover fails to give normal wear for the period of the guarantee, such as one or two years. Specifically excluded are cuts, burns, stains, soiling, and pet damage.

When there is a warranty or guarantee offered, be sure to save the sales slip as well as all labels and all information on the warranty or guarantee that comes with the furniture. Make a note of the date, the item, and the store where the purchase was made. Keep all this information in a safe place, such as in your file drawer of household papers.

Durability Standards & Fabric Grades

Various trade associations have helped in developing voluntary standards based on performance criteria for wear, seam slippage, color transfer, and tear strength. The fabric is then recommended for heavy, medium, or light duty or designated as delicate. Since the use of these standards is voluntary, not all stores or manufacturers use them.

For both upholstery and slipcover fabrics, a wide range of quality and price is available. Price may not, however, be a good guide to durability. It may reflect fiber cost and the expense of producing intricate or unusual woven or printed patterns among other things. Consumers should understand that the fabric grading, frequently indicated on samples, is an indicator of **price**, not durability.

342-002
Fiber Content: 100% Nylon
Width: 54"
Grade: F
Cleaning Code: S

This fabric chemically treated to be soil and stain resistant.

Fabric Care

Regular vacuuming of woven fabrics slows down the soiling process and postpones the need for wet or dry cleaning. Frequency is determined by the use received and amount of soil in the area. Never use a stiff fiber or metal brush on furniture as this type of brush may damage the fabric. Reverse separate seat and back cushions each time they are vacuumed. Pillows filled with down or similar cushioning material should be hand-fluffed and reversed regularly to retain original softness and resiliency. Blot spilled liquids immediately with an absorbent cloth or sponge. Remove all spots, especially oily ones, as soon as noticed to avoid permenent staining. Cleaning procedures should be checked before any method is used. Pre-test the fabric on an inconspicuous area to determine if the color will bleed. When in doubt, seek the help of a professional.

Remember, too, that complete cleaning of upholstered furniture is difficult as the cover cannot be removed. Separate arm covers and one for the head rest will protect areas subject to greatest soiling. Zippers are used on cushions for tailoring purposes only. Removal of covers for cleaning may result in shrinkage and poor fit. Though some slipcover fabrics can be washed, drycleaning is usually recommended for the sake of appearance and prevention of possible shrinkage. If the slipcovers must be washed, the fabric should be tested for shrinkage before the slipcover is made. Preshrinking may be necessary.

Non-woven fabrics benefit from frequent dusting. Vinyls can be washed with a mild detergent and water. Use of strong detergents and cleaning solvents may cause vinyls to stiffen. As leather varies,

get manufacturer's instructions before making any attempt to clean it. (See the section on Non-Woven Fabrics that follows.)

Dyeing is a complex science involving many types of dyes and processes. Although manufacturers pay careful attention to dyes, problems with fastness still exist. Within each category of dyestuffs, there are variations in light fastness. Consequently, fabrics should be protected as much as possible from direct sunlight.

For additional information on cleaning procedures and spot removal, ask for publication B2085, "Care and Cleaning of Upholstered Furniture" at your county Extension office.

Furniture Cleanability

To date, there is no mandatory requirement that care labeling be provided for upholstered furniture and furniture fabrics. However, this is being considered by the Federal Trade Commission as a possible amendment to the present Care Labeling Rule.

Some manufacturers have adopted the uniform standards for furniture cleanability developed by a joint industry committee. Use of these standards is voluntary. If used, each fabric will be marked with a code which indicates the appropriate cleaning method. The code may be printed on fabric samples, on a label under seat cushions and/or on hang tags. This cleaning information also helps the consumer select fabric appropriate for a specific use. For example, if the fabric is labeled "X-Vacuum Only," it would not be appropriate for heavy use —especially by children.

7001-02

Fiber Content: 100% Acrylic

Width: 54"

Grade: G

Cleaning Code: S

This fabric chemically treated to be soil and stain resistant.

Spot removal can be attempted with relative safety and prompt attention helps prevent setting of stains. Professional service is advisable for *overall* cleaning. For various reasons, many consumers plan to do this themselves. However, limited experience and knowledge of fibers, fabrics and finishes, make this practice risky.

Before any cleaning is attempted, vacuum furniture thoroughly. Drycleaning solvents, if required, should always be used out-of-doors or in a well-ventilated room. Consumers should never attempt overall cleaning with drycleaning solvents. Many are flammable with fumes dangerous to health. As some are also toxic, contact with skin should be avoided. Be sure to read and follow all precautionary instructions on the container.

The codes and methods below are based on the voluntary standards developed by the joint industry committee.

"W" – **Use Water-Based Cleaner**: Spot clean this fabric with the *foam only* of a water-based cleaning agent such as a mild detergent or commercial upholstery shampoo. Use sparingly. Avoid overwetting. Some household cleaning solvents may damage the color, fiber, and/or appearance of a fabric. Overall cleaning by a professional furniture cleaning service is recommended.

"S" – **Use Solvent Cleaner**: Spot clean this fabric with a mild water-free drycleaning solvent available in local stores. Use sparingly in a well-ventilated room. Overall cleaning by a professional furniture cleaning service is recommended. CAUTION: Use of water-based solvent cleaners may cause spotting and/or excessive shrinking. Water stains may become permanent as solvent cleaning agents will not remove them.

"S-W" – **Use Water-Based or Solvent Cleaner**: Spot clean this fabric with a drycleaning solvent, mild detergent foam, or an upholstery shampoo. Use solvents in a well-ventilated room. Overall cleaning by a professional furniture cleaning service is recommended.

"X" – **Vacuum Only**: Clean this fabric only by vacuuming or light brushing to prevent accumulation of dust or grime. Water-based foam or solvent-based cleaning agents of any kind may cause excessive shrinking, fading, or spotting.

Non-Woven Fabrics & Their Care

Coated Fabrics

Vinyls used in upholstery frequently have the look and feel of fine leather, woven and, even, embroidered fabric. A variety of other textures, printed patterns, and colors are also available. Although most vinyls are now more comfortable to sit on than in the past, they still tend to feel overly warm in hot weather. Vinyls tend to stand up well under heavy use but, if punctured, there is no hope of repair. In general, the thicker the vinyl and its backing fabric (knit, woven or non-woven) the more durable it will be. Some vinyls are engineered to stretch easily over molded furniture. While easily cleaned with a *mild* detergent and water, some substances such as ink from felt tip and ball point pens may cause permanent stains.

Polyurethane or polyester coated fabrics are newer than vinyls and, in many ways, resemble them. They tend to be thinner than vinyls and are soft and pliable.

Leather

Until a generation ago, **leather** was commonly used for seating and furniture surfaces but today it tends to be a luxury item. It is, however, a very durable material that is comfortable to sit on. As leathers vary, manufacturers' care instructions should always be consulted. In general, there are two types: leather that has a surface coating and leather which has very little surface protection. Either type can be colored or natural. Frequent dusting is the only way to clean most leathers with limited surface protection. An art-gum eraser may remove ordinary dirt. The uncoated surface readily absorbs liquids and oily substances and stains may be impossible to remove. For the same reason, leather cremes may create blotches. On the other hand, coated leathers resist staining. They can be occasionally washed with a mild soap (such as castile) and water, wiped with a slightly damp cloth, and buffed dry. A leather creme can also be used once or twice a year. Even for this type of leather, some manufacturers warn against use of oils. Sufficient oils are incorporated during the tanning process and excess oil may degrade the leather.

Saddle soap (a combination of mild soap and neatsfoot oil) is frequently mentioned for cleaning and softening tanned furniture leathers produced prior to 1946. Older leathers are frequently dried out and need some lubricating. These leathers can also be cleaned with a mild soap and water and rubbed with an emulsion dressing while still damp.

All leathers should be protected against excess moisture, direct sunlight, and heat. Under no conditions should varnishes or furniture polishes ever be used.

Summary

When purchasing a piece of upholstered furniture or a fabric for reupholstering or slip covers . . .

- Consider the kind of wear it will receive and care required.
- Consider type and scale of pattern in relation to the furniture it will cover and the room in which it is used.
- Consider the effect of color. Relatively light colors create a feeling of more spaciousness than dark colors.
- Ask for arm covers and extra fabric to protect the head area.
- When heavy use is expected, choose a fabric of a close firm weave and tightly twisted yarns that will not snag or pull.
- Remember that preventative care is important. Vacuum regularly and give immediate attention to spills and stains.
- Consider soil-resistant finishes but remember that these only *resist* soil and stains and assist in soil removal. They do not *prevent* soiling.
- Remember that colors may fade. Protect furniture from constant exposure to direct sunlight and heat.
- Be sure you are happy with your choice. Generally, aesthetic factors, wear requirements, and care are equally important factors. Dissatisfaction with any one of them may lead to disappointment.

Glossary

Abrasion Resistance - ability of a fabric to resist wear through rubbing

Brocade - a weave characterized by a raised pattern

Brocatelle - a variation of brocade with a higher raised pattern created by unequal yarn tension and an extra set of threads for the backing

Damask - a reversible patterned weave, the pattern being made visible by a contrast between warp-faced areas and filling-faced areas

Filament - a continuous fiber strand

Filling - crosswise yarns: same as weft or woof

Frieze - fabric with an un-cut loop pile

Matelassé - a double cloth with a surface that appears quilted

Nap - a fuzzy surface

Pile - a raised surface

Pile Weave - fabric produced by using an extra set of filling yarns which form loops. Loops can be cut or uncut

Plush - similar to velvet but with a higher pile

Resilience - ability of a fiber to return to its original shape after being stretched or crushed

Soil-Resistant - a treatment or finish which decreases soiling tendency of fibers

Solution-Dyed - process by which the liquid substance from which manmade fibers are made is dyed, resulting in better colorfastness

Staple - relatively short fibers that form a long strand (yarn) when spun and twisted

Velour - a velvet-like fabric with a pile or napped surface

Velvet - fabric with a short, dense cut pile

Warp - yarns which run lengthwise in a fabric

Welts - fabric-covered cording inserted between seams for purposes of decoration or reinforcement

Reference to products in this publication is not intended to be an endorsement to the exclusion of others which may be similar. Persons using such products assume responsibility for their use in accordance with current label directions of the manufacturer.

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This bulletin was written by Jane Graff, associate professor of interior design, School of Family Resources and Consumer Sciences, University of Wisconsin-Madison and Division of Professional and Human Development, University of Wisconsin-Extension, and Dorothy Luening, former specialist, Division of Professional and Human Development, University of Wisconsin-Extension, with assistance by Manfred Wentz, professor of textile science, and Ruth Diez, associate professor of textiles and clothing, University of Wisconsin-Madison. Reprinted with permission by the Ohio Cooperative Extension Service.

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